

ABSTRACT OF THE DISCLOSURE

Interconnected master and slave transceivers provide data communication between host computers. Each transceiver receives and encodes elements of a first data sequence from its local host computer at a first rate and employs a finite impulse response (FIR) filter to interpolate elements of the encoded first data sequence to produce elements of a second data sequence at a higher second rate controlled by a local clock signal. The second data sequence controls the amplitude of an analog signal sent to the other transceiver. Each transceiver also processes the analog signal arriving from the other transceiver to produce elements of a third data sequence at that second rate and employs a second FIR filter for interpolating the third data sequence to produce elements of a fourth data sequence at the slower first rate. Fourth data sequence elements are then decoded to produce elements of a fifth sequence forwarded to the local host computer at the first rate. A clock recovery system within the slave transceiver processes the fourth data sequence to recover the timing of the master transceiver's local clock signal, and adjusts coefficients of the slave transceiver's FIR filters in accordance with the recovered clock signal timing.

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